Message

From: Adams, Glenn [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C79E328CD4484265B012DFA81663F5E7-ADAMS, GLENN]
Sent: 3/23/2021 4:58:46 PM
To: Chaffins, Randall [Chaffins.Randall@epa.gov]; Amoroso, Cathy [Amoroso.Cathy@epa.gov]; Horsey, Maurice [Horsey.Maurice@epa.gov]; Monell, Carol [Monell.Carol@epa.gov]
Subject: RE: Oak Ridge, Administrator's Decision, implementation issue

Thank you!

From: Chaffins, Randall <Chaffins.Randall@epa.gov>
Sent: Tuesday, March 23, 2021 12:50 PM
To: Amoroso, Cathy <Amoroso.Cathy@epa.gov>; Adams, Glenn <Adams.Glenn@epa.gov>; Horsey, Maurice <Horsey.Maurice@epa.gov>; Monell, Carol <Monell.Carol@epa.gov>
Subject: RE: Oak Ridge, Administrator's Decision, implementation issue

Carol/Glenn: In lieu of Thursday meeting, let's discuss during the SEMD general discussion in the morning. Glenn, I will forward the invitation.

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From: Amoroso, Cathy <Amoroso.Cathy@epa.gov>
Sent: Tuesday, March 23, 2021 12:42 PM
To: Adams, Glenn <Adams.Glenn@epa.gov>; Chaffins, Randall <Chaffins.Randall@epa.gov>; Horsey, Maurice <Horsey.Maurice@epa.gov>; Monell, Carol <Monell.Carol@epa.gov>
Subject: Oak Ridge, Administrator's Decision, implementation issue

Hello,
This is a heads up. Jay Mullis may be contacting Carol and Greg Young (TDEC) regarding the "dilution question." Glenn and I have requested a meeting with you all to discuss, but a meeting time/date hasn't been set yet.

DOE's has gotten ahead of us, and Jay will be calling/emailing to express his concerns.

Issue: Oak Ridge Reservation, Administrator's 12/31/2020 Decision regarding the discharge of radionuclides in wastewater to surface water, specifically the meaning/intent of the decision with regards to extrapolating from instream concentrations to effluent number at the point of compliance, and whether a dilution factor can be applied.

Background:
EPA/DOE/TDEC are working at a project team level to develop PRGs and effluent levels for radiological discharges into Bear Creek, per the Administrator's decision. We have hit a snag in implementing the decision with regards to

extrapolating from instream PRG to an end-of-pipe effluent (point of compliance), and whether a dilution factor can be applied.

Regarding developing PRGs and effluent levels for radionuclides, the project team will:

1. Select a stretch of Bear Creek that could reasonably be fished (recreation). Conduct fish survey/population study and develop agreed upon consumption rates/frequency.
2. Using PRG calculator, develop in-stream PRGs for each radionuclide, using the site-specific consumption inputs (rather than default consumption inputs).
3. Using the resulting PRGs, develop effluent level at the point of compliance (the end-of-pipe).

Interpretation of Decision:

- DOE/UCOR envisions applying a dilution factor to account for the distance and flow rates of the place that could be reasonably fished back to the discharge point. There is a big difference in flow rate from the place where fishing may occur to end-of-pipe (the v-weir).
- The R4/tech team, however, understands the decision to instruct us to develop a PRG for fish consumption, and apply that number to the point of compliance with no dilution factor. (The CWA AWQC and the PRG calculator use the same equation to develop instream water concentrations. Neither equation includes a dilution factor. The instream water quality number, whether developed using the PRG calculator tool or using the CWA AWQC formula, is calculated the same way.) In our view, the assimilative capacity of the receiving water body at the point the effluent the pipe enters the water can be used to adjust the discharge limit. Using the stretch of Bear Creek between the discharge point and the fishing hole is inconsistent with the CWA principles and the NCP.

To be considered:

a) DOE is oriented to "point of exposure". They see the fishing hole as the place to achieve the water quality standard, and that water quality is not a concern in the upstream stretch of creek between the point of discharge and the fishing hole. R4 sees the water quality goal as applying to the entire surface water body, similar to a CWA ambient water quality criteria concept.
b) The decision affirms the CWA as relevant and appropriate. The "relief" given by the decision is that, rather than using CWA default parameters for fish consumption, site specific consumption rates can be used.
c) To account for the flow rate of the receiving water body, the assimilative capacity of the receiving body can be used to extrapolate the instream PRG to an effluent limit (unfortunately, the small tributaries to Bear Creek have little/no assimilative capacity).

R4 interpretation is very different than DOE's. Glenn and I and some of the R4 technical team reached out to FFRRO and FFEEO last week to gain some insight from those involved with drafting the decision. We had a discussion, but the matter wasn't resolved. The next step is for R4 to write up some bullets for HQ and for additional discussion. Once EPA forms an internal opinion, we can share that with the project team and EIT.

In the meantime, DOE knows that Glenn and I are seeking clarification from HQ about the intent of the decision. Jay may believe we are further along in those discussion than we are. He may express concern that we've talked to EPA HQ rather than the SLT about this matter.

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